whorl, termination of the body-whorl sharply descending at the aperture to about the middle of the whorl. Aperture very oblique; lip obtusely angled and almost perpendicular below the middle of the whorl; strongly constricted behind the reflected lip; peristome well expanded above, narrower below, somewhat flexuous, united over the body by a thin callus; parietal lamellæ two, converging, but not united at the inner end into a V; the lower lamella stout, sinuous, the outer end bent sharply towards the umbilicus; the upper lamella low, narrow and straight, starting near the upper insertion of the lip and terminating back of the front end of the lower lamella; basal part of the peristome with two strong lamellæ transverse to the lip, the upper ends converging and united at the base on the lip, forming a U; a broader and less transverse lamella set more deeply within the aperture on the upper lip, a small internal lamella on the base of the body whorl about three or four mm. long, showing faintly through the shell.

Greater diameter 20½, lesser 18, alt. 6¾ mm. Black Mountain, at the southern end of the San Andreas Range, Donna Ana county, New Mexico, at an elevation of about 6,800 feet.

This interesting shell was first collected by Mr. Walter E. Koch over a year ago. He sent me one perfect and one broken shell. Lately he has sent me three additional specimens, also dead. He reports dead shells quite plentiful in the crevices of a limestone cliff, but was unable to find living ones. I take great pleasure in naming the shell after him.

Type no. 5765 of my collection.

A. kochii is undoubtedly closely related to *A. mearnsii*, but is very much larger, more strongly carinated, and differs markedly in the umbilical region.

Both of these species will be figured on plate VI, to appear next month.

NOTES ON THE GENUS STROBILOPS.

BY HENRY A. PILSBRY.

The small forest-snails known as *Strobilops* are spread throughout all parts of North America east of the Rockies where sylvan conditions prevail, from Canada to Florida, Mexico and Central America.

Southward the genus extends to Venezuela, and even to the Galapagos Islands, if I am right in referring the little snail described as *Endodonta helleri* Dall to this genus.

For many years similar snails have been known from the European Tertiaries, beginning with the Eocene and running up with numerous species through the Miocene, when the group apparently died out in that region, though many of its companion groups survived.[1]

Père Heude, the keen and brilliant Jesuit missionary-naturalist, described the first Asiatic *Strobilops*, in his memoirs on Chinese snails, under the name *Helix diodontina*. He did not recognize its kinship with other forms of *Strobilops*, nor has this been noticed by any other author until the present year, when the receipt of specimens of a *Strobilops* from Korea gave occasion for referring the Chinese *H. diodontina* to its proper genus. The Korean species, which I have decribed as *Strobilops hirasei*,[2] is conic, like most American species, but it is simply striate instead of being ribbed. Quite lately a third Asiatic species has been sent by Mr. Hirase, discovered in the main island of Japan. It will be described in the Japanese *Conchological Magazine*. The finding of three species, in China, Korea and Japan, indicates Eastern Asia as another evolution-center for species of *Strobilops*. Probably still more will turn up there as the country is further explored.

But this is not all. Several years ago Dr. O. von Moellendorff described several small snails from the Philippine Islands under the generic name *Plectopylis: P. quadrasi* with a variety *brunnescens* from Luzon, and *P. trochospira* from Bohol. In his able and exhaustive work on *Plectopylis*,[3] Mr. G. K. Gude has erected a subgenus *Enteroplax* for these species, rightly holding that they differ markedly from true *Plectopylis*. In reality, these Philippine snails are nothing more or less than *Strobilops*, having the form, sculpture, peristome and internal armature of this genus, the entering lamellæ or cords on the parietal wall being minutely nodose, as in American and East Asiatic *Strobilops*. These Philippine species will stand as *Strobilops quadrasi* (Mlldff.) and *Strobilops trochospira* (Mlldff.).

[1] The identification of *S. labyrinthica* as a European fossil, recorded in Woodward's Manual and copied in some American works, is erroneous. The foreign species is quite distinct.

[2] The Magazine of Conchology, II, p. 39, figs. Y. Hirase, Kyoto, 1908.

[3] The Armature of Helicoid Land Shells, Science Gossip, 1899, p. 149.

As to the place of origin of *Strobilops* we have no reliable data. The presence of typical forms of the genus in the Eocene shows that the group is a very old one, evolved in the Mesozoic. It is, moreover, strikingly distinct from all other genera, and wonderfully conservative in general morphology. Until information from Mesozoic strata comes to hand, we can only surmise with some probability that *Strobilops* arose somewhere in the northern hemisphere. It probably overran the entire Holarctic realm a long time ago, pushing southward into the Oriental region and the American tropics at a time remote enough to permit the evolution of strongly marked species in these areas.

ANOTHER LARGE MIOCENE SCALA.

BY W. H. DALL.

Mr. W. W. Atwood of the U. S. Geological Survey has been making a study of the Miocene strata of Alaska Peninsula and the Shumagin Islands during the past summer, and collected a number of interesting fossils. Among these is a specimen of a species of *Scala*, or *Epitonium*, belonging to the group of giant Scalidae which is so characteristic of the Miocene of Oregon and some other parts of the Pacific coast. The list comprised the following species already described and figured.

Opalia rugifera Dall,

Arctoscala condoni Dall,

Catenoscala oregonensis Dall;

together with the species about to be described. The type of *Arctoscala* is *A. greenlandica* Perry, a recent species. *Opalia rugifera* is a member of the group represented in the San Diego Pliocene by *O. varicostata* Stearns, and in the recent fauna by *O. borealis* Gould. *Catenoscala* is a new group in which the anterior third of the whorl is covered with a thick layer of enamel.

Epitonium (*Acrilla*) *atwoodi* n. sp.

Shell large, with rotund whorls rapidly increasing in size; surface covered with a low reticulate sculpture comprising low axial lamellæ, about 1.5 mm. apart on the periphery of the whorls, slightly